

CLAIMS

I claim:

- 5 1. A wheel spindle and dust cup assembly comprising:
 a spindle; and
 a dust cup extending radially from the spindle and being integrally formed
with the spindle, the spindle and dust cup being formed from a single shaft.
- 10 2. The wheel spindle and dust cup assembly of Claim 1, wherein the shaft has a
circumference, the dust cup being continuously joined to the spindle around the
circumference of the shaft.
- 15 3. The wheel spindle and dust cup assembly of Claim 1, wherein the dust cup
includes a disc-shaped flange extending radially outwardly from the shaft to an outer edge
and a ridge extending from the outer edge of the flange in an axial direction relative to the
spindle.
- 20 4. The wheel spindle and dust cup assembly of Claim 1, further comprising a
transition portion at an intersection of the spindle and the dust cup, the transition portion
having a radius.
- 25 5. A wheel spindle comprising:
 a spindle having an axle end connectable to an axle, a wheel end connectable
to a wheel, and an intermediate portion defined between the axle end and the wheel end; and
 a dust cup extending radially outwardly from the intermediate portion to an
outer edge and being integrally formed with the spindle.
- 30 6. The wheel spindle of Claim 5, wherein spindle includes a bent portion
between the axle end and the dust cup.
7. The wheel spindle of Claim 5, wherein the shaft has a circumference, the dust
cup being continuously joined to the spindle around the circumference of the shaft.

8. The wheel spindle of Claim 5, wherein the dust cup includes a disc-shaped flange extending radially outwardly from the spindle to an outer edge and a ridge extending from the outer edge of the flange in a generally axial direction relative to the spindle, the dust cup defining a circular cavity between the ridge and the spindle.

5

9. The wheel spindle of Claim 5, further comprising a transition portion at an intersection of the spindle and the dust cup, the transition portion having a radius.

10. A method of making a wheel spindle and dust cup assembly, the method comprising the acts of:
providing a shaft;
forming from the shaft a spindle having an intermediate portion; and
forming from the shaft a dust cup on the intermediate portion of the spindle.

11. The method of Claim 10, wherein the act of forming the dust cup includes the act of cold forging the dust cup from the shaft.

12. The method of Claim 10, further comprising the act of bending the shaft to a generally L-shape.

20

13. The method of Claim 10, wherein the act of bending the shaft is performed after the act of forming the dust cup.

14. The method of Claim 10, wherein the act of forming the dust cup includes the acts of
forming a disc-shaped flange extending radially outwardly from the shaft to an outer edge, and
forming a ridge extending from the outer edge of the flange in a generally axial direction relative to the spindle.

30

15. The method of Claim 10, wherein the act of forming the dust cup includes the acts of forming a transition portion at the intersection of the spindle and the dust cup, the transition portion having a radius.

16. A wheel spindle made by a process comprising the acts of:
providing a shaft;
forming from the material of the shaft a spindle; and
forming from the material of the shaft a dust cup on the spindle.

5

17. The wheel spindle of claim 16, wherein the act of forming the dust cup includes the act of cold forging the dust cup from the shaft.

18. The wheel spindle of Claim 16, further comprising the act of bending the shaft
10 to a generally L-shape.

19. The wheel spindle of Claim 16, wherein the act of bending the shaft is performed after the act of forming the dust cup.

- 15 20. The wheel spindle of Claim 16, wherein the act of forming the dust cup includes the acts of
forming a disc-shaped flange extending radially outwardly from the shaft to an outer edge, and
forming a ridge extending from the outer edge of the flange in a generally
20 axial direction relative to the spindle.